

Notice of Allowability

Application No.

10/667,859

Examiner

Ling-Siu Choi

Applicant(s)

KIMBERLEY ET AL.

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 05/11/2006.
2. ☒ The allowed claim(s) is/are 25-28 and 31-33.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 09/659,589.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

1. This Office Action is in response to the Reply to Office Action filed May 11, 2006. Claims 1-24, 29-30, and 34-39 were canceled and claims 25-28 and 31-33 are now pending, which are drawn to a copolymer of ethylene and a further 1-olefin.

Examiner's Amendment

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CAR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

3. The application has been amended as follows:

Page 1, line 1, change "This application is a divisional of Application No. 09/659,589, filed September 11, 2000 which is a continuation" to --This application is a divisional of Application No. 09/659,589, filed September 11, 2000, now US Patent No. 6,657,026, which is a continuation--.

Allowable Subject Matter

4. Claims 25-28 and 31-33 are allowed.

Art Unit: 1713

5. The following is an examiner's statement of reasons for allowance:

The present claims are allowable over the closest reference: Bennett (US 5,955,555) and Yasuhiko et al. (JP 10-007712).

copolymer of ethylene and 1-olefin	
<u>degree of short chain branching per thousand carbons</u> (SCB)	2.0-10
<u>modulus in MPa (M) & SCB(B)</u>	M = k - 62.5B with $k \geq 820$ [M + 62.5B \geq 820]

(Summary of claim 25)

Bennett discloses polyethylene obtained in the presence of a catalyst system comprising iron (or cobalt) complex of 2,6-diacylpyridinebis(imine) (claim 1). It is noted that the polyethylene disclosed by Bennett is a homopolymer of ethylene (abstract; all Examples; all claims), whereas the present invention is drawn to a copolymer of ethylene and 1-olefin with the mole % of the comonomer being 0.4-2.0 (calculated from the SCB). Furthermore, the present invention is drawn to a copolymer which is made in the presence of mixed catalysts. In conclusion, there is no reasonable base to assume that the polymer would possess the claimed properties. Thus, Bennett do not teach or fairly suggest the claimed copolymer which has the specific SCB and modulus.

Yasuhiko et al. disclose a copolymer of ethylene and 1-hexene, obtained in the presence of a transition metal compound and an aluminum compound, wherein the transition metal compound is represented by the formula 3 and the aluminum compound

Art Unit: 1713

is R^{11}_3Al (solution; claims 1-3; [0001]-[0002]). The transition metal is preferable to be Cr although M can be a transition metal other than Cr such as iron and cobalt ([0009]). It is noted that the present invention is drawn to a copolymer of ethylene and 1-olefin, which is made in the presence of mixed catalysts. In conclusion, there is no reasonable base to assume that the resulting copolymer would possess the claimed properties because the use of a different catalyst leads to a polymer having different properties.

Accordingly, Yasuhiko et al. do not teach or fairly suggest the copolymer having the claimed SCB and modulus.

In light of the above discussion, it is evident as to why the present claims are patentable over the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

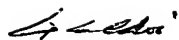
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ling-Siu Choi whose telephone number is 571-272-1098.

If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reach on 571-272-1114.

Application/Control Number: 10/667,859

Page 5

Art Unit: 1713



LING-SUI CHOI
PRIMARY EXAMINER

July 21, 2006